




Read the complete manual before attempting installation and activating the system.

1. DESCRIPTION

This flush-mounting push button dimmer with reverse phase control has a maximum load of 100W and is suitable for dimming Philips® LED fixtures (see 3.4) and dimmable economy lamps. Remote control via N.O. contacts. Maximum of 30 non-illuminated push buttons in parallel.

2. INSTALLATION AND CONNECTIONS

To connect the load and the necessary power supply voltage, see the wiring diagrams below . To regulate the minimum level in cases of incorrect light output, see . For installation, see .

3. OPERATION AND USE

3.1. Normal operation

Remote control unit via N.O. contacts (not illuminated). Press briefly to switch on and off. Hold down to dim up and down. When holding down, the dimming direction is switched after each interruption (dimming up -> stop -> dimming down-> stop -> dimming up -> etc.). Once the maximum intensity has been reached, the dimming level remains unchanged. The last dimming level reached before the dimmer is switched off is saved in a memory (3.3). Up to 30 N.O. contacts (170 00000) can be connected in parallel (max. distance 100 m). The push buttons are not galvanically isolated.

3.2 The dimmer works according to the reverse phase control principle.

3.3 Memory function

The dimmer can be used with or without memory. The standard setting of the dimmer is without memory function. To change this setting, dim up to the maximum light level and then hold the control button in for 10 sec. After 10 sec., the light dims from 100% to a lower light level to indicate that this function has been switched on. After this change in light intensity, immediately release the push button. Repeat the procedure to deactivate the memory function. This function, and the last set light level, is stored in a non-volatile memory; i.e. they will not be lost in the event of a power failure. With the memory function, the dimmer switches on for the first time at a light level chosen by the manufacturer. Thereafter the dimmer switches on at the last set value.

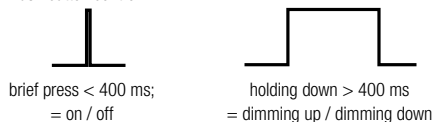
TIP! When using dimmable economy lamps, we recommend switching off the memory function.

With memory

- Press briefly = on at previous level / off
- Hold down when off = the dimmer dims up from the minimum light level
- When dimming up, the dimmer stops at the maximum.
- When dimming down, the dimmer stops for 2 sec. at the minimum and then dims back up.
- A renewed (long) press reverses the dimming direction.

Without memory

- Press briefly = on at maximum / off. Apart from that, the control is analogous to the control with memory.
- Push button control:



3.4 Lamps

- Philips® LED fixtures
 - Ledino
 - Roomstylers
 - Arcitone
 - Smartspot
 - Lirio by Philips
 - Topselection of Massive
 - Dimmable economy lamps CFLi
 - Electronic transformers
 - Halogen 230 V
- See table below (Fig. 1)

4. TROUBLESHOOTING

- Possible causes of dimmer malfunction:
- the dimmer is switched off; the load is not dimmable in reverse phase control
 - the mains voltage is not connected
 - the load is not connected or is too high
 - the lamp or the cable used is defective
 - the connected load is not suitable (e.g., a ferromagnetic transformer)
 - the thermal protection has been activated
 - a combination of the above causes

The dimmer is equipped with thermal protection. If the temperature climbs too high as a result of overloading, the dimmer switches off. If this happens:

- check whether the load is too high
- check whether mixed loads are being used
- check whether the minimum dimming level is set too low (for operation with memory)
- check the ambient temperature and positioning conditions. Depending on these factors, the maximum connection output must be reduced as follows:
 - 10% per 5°C in excess of the ambient temperature of 35°C
 - 25% for flush-mounting in an insulated wall (gypsum, wood) or when 2 dimmers are positioned next to one another

5. USAGE WARNINGS

- Control signals that are sent via the mains can interfere with the operation of the dimmer. (This is not a defect.)
- This dimmer produces a limited amount of heat under normal operating conditions. Allow for sufficient heat dissipation; do not cover the dimmer with insulating material.
- Reaction of the device after a power failure: return to the previous setting with memory/without memory.
- The dimmer is never electrically separated from the mains due to the operation of the control. In other words, all parts remain connected to the power even if the load (e.g., the light) is "off".
- This appliance is not suitable for controlling motors and ferromagnetic mains transformers.

6. TECHNICAL DATA

- Power supply voltage: 230V~ ± 10%, frequency 50Hz
- Mounting: This dimmer fits in a standard flush-mounting box with a min. depth of 40mm
- Weight: ± 75g
- Ambient temperature (Ta): 35°C
- Designed for use in an environment with non-condensing humidity
- No-load power consumption: ± 0.6W (unloaded)
- Maximum wire diameter per connection terminal: 2.5 mm²
- Power supply and load: 2 x 1.5 mm² or 1 x 2.5 mm²
- Push button input: 2 x 1.5 mm² or 1 x 2.5 mm²
- Minimum load: 2W
- Maximum load: 100W
- No voltage drop over the dimmer
- Protections: thermal overload protection; short circuit protection
- Push button controls: 230 V, 5 mA (not galvanically isolated)
- Max. distance to the last push button: 100m
- Complies with the EN60669-2-1 standards

7. LEGAL WARNINGS

- The installation has to be carried out by a qualified person and in compliance with the statutory regulations.
- This user manual has to be handed over to the user. It has to be included in the electrical installation file and has to be passed on to any new owners. Additional copies are available on the Niko website or via the support service.
- During installation, the following has to be taken into account (not limited to list below):
 - The statutory laws, standards and regulations;
 - The state of the art technique at the moment of installation;
 - This user manual, which must be read within the scope of each specific installation, only states general regulations;
 - The rules of proper workmanship
- In case of questions, you can consult Niko's support service or contact a registered control organisation.








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In case of a defect, you can return your product to a registered Niko wholesaler, together with a clear description of your complaint (Conditions of use, stated defect...).



8. GUARANTEE PROVISIONS

- Period of guarantee: 2 years from date of delivery. The delivery date is the invoice date of purchase of the product by the consumer. If there is no invoice, the date of production applies.
- The consumer is obliged to inform Niko in writing about the defect, within two months after stating the defect.
- In case of a failure to conform, the consumer has the right to a repair or replacement (decided by Niko) free of charge.
- Niko cannot be held liable for a defect or damage as a result of an incorrect installation, improper or careless use or wrong usage or transformation of the goods.
- The compulsory regulations of the national legislation concerning the sales of consumer goods and the protection of the consumers in the countries where Niko sells, directly or via sister or daughter companies, chain stores, distributors, agents or permanent sales representatives, take priority over the rules and regulations mentioned above.

Fig.1

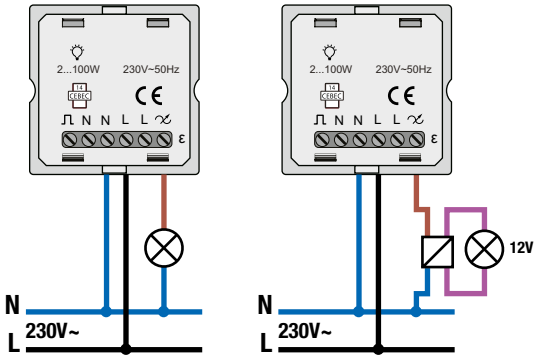
Lamp	Philips® LED fixture type 30W	Philips® LED fixture type 7,5W				
				 HAL.230V	 HAL.12V	dimmable
Max.	3 units	10 units	100W	100W	100W	100W
Min.	1 unit	1 unit	2W	2W	2W	2W

Key to symbols

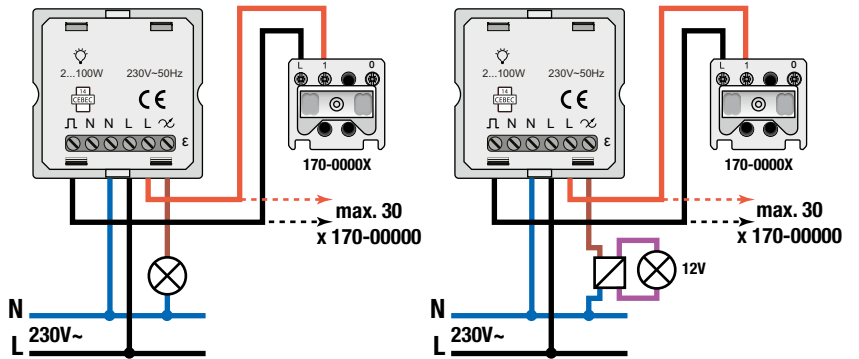
	Metal filament lamps
	Electronic transformers

➔ ❶ DIMMER AANSLUITEN/ RACCORDEMENT VARIATEUR / DIMMER ANSCHLIESSEN / CONNECT DIMMER

1 bedieningspunt
1 point de commande
1 Bedienungspunkt
1 control point



Meerdere bedieningspunten
Plusieurs points de commande
Mehrere Bedienungspunkte
Several control points

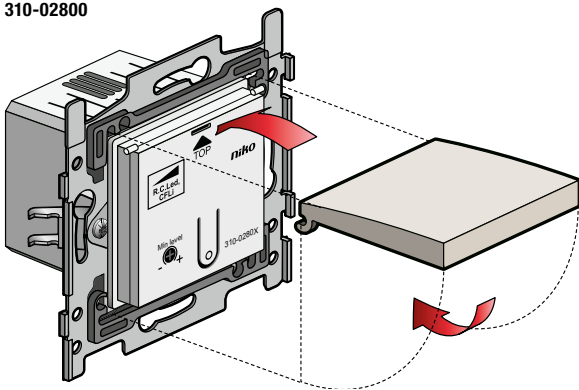


➔ ❷ MINIMUMNIVEAU INSTELLEN / RÉGLAGE DU NIVEAU MINIMUM / MINDESTDIMM NIVEAU EINSTELLEN / SETTING THE MINIMUM LEVEL

ACTION	CHECK	CONCLUSION	ACTION	CHECK
Dim to MINIMUM		<p>✓ Minimum dimniveau OK Niveau de variation minimum OK Mindestdimniveau ist OK Minimum dimming level OK</p>	/	
		<p>✗ Minimum dimniveau te hoog Niveau de variation minimum trop élevé Mindestdimniveau ist zu hoch Minimum dimming level too high</p>		
		<p>✗ Minimum dimniveau te laag Niveau de variation minimum trop bas Mindestdimniveau ist zu niedrig Minimum dimming level too low</p>		

➔ ❸ MONTAGE / MOUNTING

310-02800



310-02801

